TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

26 PERFORMANCE MEASURES

To effectively measure and monitor Program performance, Serco will apply multiple proven approaches to successfully fulfill the GDOT RAM vision and meet its goals. Serco believes in measuring what matters, and making sure that what matters is measured.

26.1 THE VALUE OF MEASURING PERFORMANCE AND MONITORING THE PROGRAM

We know from our experience of delivering public services worldwide that a correctly established monitoring, performance management, and reporting approach is more than a method of ensuring contractual compliance; it is a tool for delivery. We adhere to the adage that *what gets measured gets done*, but as a service company charged with delivering outcomes to the public, we also recognize a further truth: we must *measure what matters*. This simple but powerful mantra demands that we accurately monitor program operations and measure value from our stakeholders' perspectives and not just from our internal program points of view. We ensure that the Program is delivering to the traveler, the taxpayer, and to the State of Georgia.

For a new innovative mission-critical program like GDOT RAM, we closely monitor and manage operational and strategic performance. But this is not just because they are important; it is because they are interdependent. Understanding the critical linkages between what is happening in operations today, and what it tells us about whether we are moving towards our shared ultimate objectives, is the essence of ensuring that we are on track to deliver strategic outcomes. As a provider with a focus on what our service means to the traveling public, these are the type of questions we must ask at the program level to ensure that the program is meeting operational needs as well as achieving GDOT goals.

26.2 APPROACH TO MEASURING PERFORMANCE

Our approach focuses on putting the right metrics and controls in place to achieve the desired outcomes at the strategic, operational, and tactical levels. It extends beyond simply monitoring the prescribed Service Level Agreements (SLAs), and includes analytical insights to understand trends and dependencies. Effectively measuring performance includes designing and delivering effective metrics, controls, analysis, reporting, and performance management as described below:

- **Performance metrics.** Our metrics are critically aligned to the delivery of GDOT's vision and stakeholder expectations, and then to the strategic and operational objectives that achieve them. These objectives in turn are linked to the operational and tactical level processes and activities that will deliver the objectives. This is how we ensure that we are focusing on what matters, and that we are putting effort into the things that deliver the greatest value. We place such high emphasis on performance measures so that we can identify what processes or procedures are affecting key outputs and deliverables, and take corrective action quickly to remedy the cause of the problem, not just the symptom. Refer to Section 26.4 for a description of our performance metrics.
- **Appropriate controls.** With our metrics defined, we design and implement appropriate controls to ensure that there is an adequate feedback loop on performance. This is especially important for the key business drivers, for which early control and intervention can prevent circumstances from accelerating out of control. This includes, but is not limited to, safety statistics, motorist assists, incident hot-spots; field maintenance team assignment and interactions, fleet and asset management, customer interactions including comment cards from the public, maintenance teams, and working with the TMC, etc.
- **Trend analysis.** Once we establish metrics, we analyze trends and start highlighting areas in which our processes are succeeding as intended and identifying areas that need attention. As increasing

amounts of data become available, individual data points become less relevant and overall trends begin to reveal the critical relationships that will drive service performance. Trend analysis and the use of leading indicators are increasingly useful. Performance reporting is not only about current operational performance, but also about whether we are meeting strategic goals and program outcomes. Because these things are inextricably linked, we must look for trends in performance at the strategic level in our GDOT RAM Program.

- **Aligned staff objectives.** We flow metrics down to teams and individuals so that there is clarity down to the level at which the work is done. We empower people at all levels of the Team to ensure they understand how their actions impact our key outputs. Providing employees with the visibility of the impacts of their decisions and their actions is critical, especially when undertaking safety focused mission critical work such as this. It also allows our PM, District RAM Managers, and RAM Supervisors to compare successive shifts across regions to identify best practices. Not only does this drive better performance, it also embeds ownership, identifies areas of success, and creates a culture that focuses on the right things—those that make the greatest differences.
- **Continuous improvement.** Our metrics allow us to systematically drive our Plan-Check-Review continuous improvement cycle. As operations unfold, we assess our performance against targets and take corrective actions as needed. We also set targets to challenge our teams to deliver improved services and operational efficiencies. Serco will collaborate with GDOT to establish external benchmarking against other Serco contracts, third-party operators, and national and international contracts that have standards of recognized best practices.
- **Reporting.** To provide the GDOT RAM Program with visibility of our performance, we propose to deliver real-time information and reports to GDOT, key stakeholders, and Serco staff using data visualization tools, dashboards, formal balanced scorecards, and reporting tools. This includes near-real-time status as well as weekly, quarterly, and annual reporting on performance measures. We can provide reporting in paper and electronic formats. Serco's data visualization tools provide a real-time overview of operations, accessible via the web on any smart device, and we will make these available to GDOT.
- **Balanced Scorecards.** Our balanced scorecards are designed to translate our joint program goals, key management work streams, and overall business strategy into specific, quantifiable goals, and to monitor our performance in terms of achieving these goals. We provide a summary of all work undertaken for the GDOT RAM Program as well as a detailed overview of the performance standards for each of the Districts. We collaborate with GDOT to establish metrics and reporting measures that encompass all SLAs, KPIs, and additional data point information. We identify KPIs from the start of the contract and include those we develop as we deliver the GDOT RAM Program services, providing an enhanced and transparent approach to measuring and demonstrating our performance. As part of our ongoing drive for continuous improvement, Serco also recognizes that SLAs require an ongoing assessment through the life on the contract to increase performance levels. Examples of dashboard screens taken from Serco's current Department of Transportation (DOT) contracts are shown in **Figure 26-1.** Our dashboards are available to staff online as well as on Flat Panel monitors displayed in the District Offices and other relevant locations so that performance metrics become a visible and prominent feature of the service.

Figure 26-1. Sample Screen Shots of Current Dashboards Deployed by Serco in DOTs. *Enables comprehensive Program monitoring against quantifiable goals.*

26.3 Developing Data Sources for Monitoring the Program

For the GDOT RAM Program Serco will deploy ProgramVision. ProgramVision is a solution that gathers, enhances, and presents information to end users with the intent to create management information to support the decision making process (described in Section 26.5). Specifically for the GDOT RAM Program, the system is designed to store data with regard to incidents, maintenance work orders, and RAM patrol routes. Data is obtained from a variety of sources (as available) through application program interfaces such as NaviGAtor, WebEOC, AgileAssets, HERO Logging Application, Customer Service Application, GEARS, M5 Fleet Management, WhenToWork, and Learning Management System (LMS), etc.

We capture data from all aspects of our operational interfaces. We capture key performance measures from the recording and analysis of our interactions with roadside assistance, incident management, maintenance, people management, and customer service.

26.3.1 Roadside Assistance and Incident Management—NaviGAtor Integration

We draw on our experience with other performance-based DOT contracts to collect data from the NaviGAtor system pertinent to GDOT RAM operations. We use the data to develop the dashboard, metrics, and trends and then make these fully available to GDOT. We capture data including but not limited to the following:

- Locations where accidents occur
- Locations where specific motorist services occur
- Average time spent performing traffic control at an incident
- Average time spent with motorist for non-accident safety service events
- Routes patrolled
- Number of occurrences traffic control was provided at an incident scene
- Number of stops made to provide motorist service
- Number of motorist service refusals
- Number of instances drinking water was provided
- Number of tire issues addressed
- Number of jump starts provided
- Daily number of miles patrolled

- Number of abandoned vehicles tagged
- Number of small vehicle fires
- Number of times Operator spread automotive fluid absorbent
- Number of vehicles moved to the shoulder
- Number of towed vehicles from assigned bridges
- Number of phone services provided
- Number of stranded motorists transported

26.3.2 Maintenance—AgileAssets Integration

In parallel with our Roadside Assistance and Incident Management data collection, we gather data pertinent to our interactions with the District maintenance teams, including but not limited to the following:

- Locations where maintenance issues occur
- Locations where specific types of maintenance service requests occur
- Average time spent performing maintenance-related services
- Number of maintenance-related stops

26.3.3 People Management—*WhenToWork* and LMS Integration

Serco will actively manage the performance of our people on the GDOT RAM Program. Using our ProgramVision tool, we will analyze staff performance down to the individual RAM Operator level; we can determine how actions impact operations as we flow metrics down to individuals. All employees have visibility of the impacts of their decisions and actions. Serco can reward high performing individuals and teams as well as identify who needs training and development to improve performance.

26.3.4 Customer Service - GDOT RAM Customer Satisfaction Surveys

Our customer satisfaction survey system is a vital part of the GDOT RAM Program. The responding RAM Operators may be the only connection motorists have with GDOT; as such they are essential ambassadors for GDOT. Our RAM Operators will either provide a comment card to the motorist or direct them to our customized online electronic customer satisfaction survey.

For the expanding number of Millennial and other technical-savvy drivers, Serco provides a comment card with a Quick Response (QR) Code. Respondents can scan the barcode with their smartphone or other web-connected computer to directly access our electronic survey. We expect to increase the quantity of customer surveys through online inputs instead of receiving hard copy input days or even weeks later. Our Contract Manager with assistance from our District Managers will collate and assess all results and regularly report customer feedback to GDOT.

26.3.5 Further Incident Management Data—Incident Management Timeline

Serco is familiar with the GDOT TIM guidelines and recognizes that GDOT thoroughly understands the Incident Management Timeline. Serco has a unique approach to measuring every stage of the incident timeline, and we developed Standard Operating Procedures (SOPs) targeted at timeline reduction in the areas we believe we can be most effective. This approach led to a decrease in median incident duration of 2 minutes in Virginia.

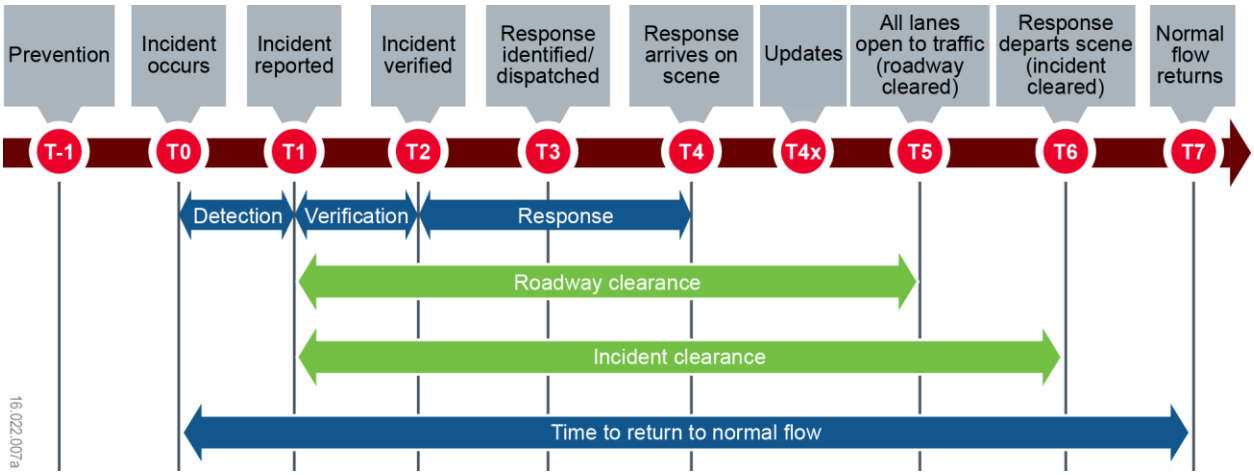


Figure 26-2. Traffic Incident Management Timeline. *With this tool, Serco monitors and measures incident response by increments of time per "T" stage.*

For the GDOT RAM program, we can be most effective in achieving measurable reductions in the following areas of the Incident Management Timeline:

T-1: Prevention. Serco exercises "active patrolling" (versus staged to stationary sites) to proactively identify and eliminate roadway hazards to prevent incidents and crashes. RAM Operators look for roadway dangers—obstacles in the road, damaged or unsafe roadway surfaces, signage problems, and other things that could distract or cause a motorist to perform an unsafe maneuver. They check with stopped vehicles to determine if help is needed and may request the motorist to move the vehicle to a safer location. Motorist needs may include fueling, mechanical and light vehicle maintenance issues, first aid, or other medical attention. Managing and tending to these incidents and issues increases safety and helps to minimize motorist distractions that could lead to additional incidents, traffic congestion, and delays. After a RAM Operator identifies a roadway issue by radio, our dispatcher immediately communicates the concern to the District and TMC, in accordance with protocol. The RAM Operator may request assistance from the Georgia State Patrol (GSP), other law enforcement or emergency services through our Dispatcher, District, and/or TMC in accordance with the SOPs.

T2: Incident Verified. Upon arrival at a suspected incident scene, the Operator immediately assesses the scene and report observed details to the Dispatcher, who inputs the data into the ATMS. The initial assessment and report typically provides the following information:

- The exact location of the incident.
- The numbers and types of vehicles involved in the incident.
- Potential injuries and needs for medical assistance.
- Any indication of a hazardous substance spill.
- The actual or potential need for fire control.
- The number of lanes closed.
- The amount of traffic back-up.
- The numbers and types of additional required responders (if the RAM is first on the scene).

T3-T6 (combined)**: Response Identified /Dispatched/Clearing.** Roadway blockages rank at the top of the list for requiring RAM assistance. These incidents have the highest impact on traffic congestion and the greatest risk for additional injuries, damage, and secondary incidents.

26.3.6 Optional Technology for Data Sources

Serco is considering complementary technologies to be priced as options for GDOT and which can be used for helping to monitor the program include the following:

- *Digital Recorder*—Digital recording devices with 8+-hour rewriteable video storage to collect information on RAM Operator driving during a shift, accident information, and other useful data to better manage and protect our Operators. This device will furnish critical information from our remote Operator teams, providing active performance monitoring that enables Serco to identify needed improvements in performance and safety.
- ***Connected Dedicated Short Range Communications (DSRC)***—In 2017, the automotive manufacturers will produce DSRC-enabled vehicles that enable vehicles to communicate vital safety information to other DSRC vehicles. Serco will equip our RAM vehicles with DSRC radios to notify approaching vehicles of stopped vehicles along the roadway. This vehicle-to-vehicle (V2V) short-range wireless communications application will detect potential hazards in a vehicle's path—even those the driver does not see and alert the driver. We believe this to be an important enhancement that could potentially save RAM Operator's lives.

26.4 Developing Metrics and SLAs/KPIs/DP

Metrics are used to drive improvements and help businesses focus their people and resources on what is important. Overall, we believe metrics should reflect and support the various strategies for all aspects of the GDOT RAM Program. To derive the most benefit from metrics, it is important to keep them simple. Our people need to understand the metric, how they can influence it, and what is expected of them.

Our proposed initial set of performance metrics for the RAM program is provided in **Table 26-1**. We expect to collaborate with GDOT to review and refine this list for actual implementation. Our approach to performance metrics encompasses three categories of metrics follows:

- Service Level Agreements (SLAs)—Measurement under the total control of Serco where we are measured and financial penalties may be applied if defined minimal levels are not achieved.
- Key Performance Indicators (KPIs)—Measurements that are not under the total control of Serco yet important indicators that the entire team should track and strive to achieve. These indicators are monitored and analyzed, and action plans developed to improve performance.
- Data Points (DP)—Items of interest that are measured and studied to evaluate trends. As these measurable items are better defined and controlled, these items can move to SLAs or KPIs.

26.4.1 Examples of KPIs

Serco will work with the Department to develop a KPI pack to facilitate program monitoring and reporting. To develop these KPIs, we will draw from existing GDOT information and from our experience delivering similar services. Below are examples of assembled data taken from Serco's other statewide operations similar to GDOT RAM operations:

- **Figure 26-3.** Accidents and Incidents by Time of Day
- **Figure 26-4.** Accidents and Incidents by Region
- **Figure 26-5.** Average Incident Duration by Type
- **Figure 26-6.** Incidents per Reporting Period

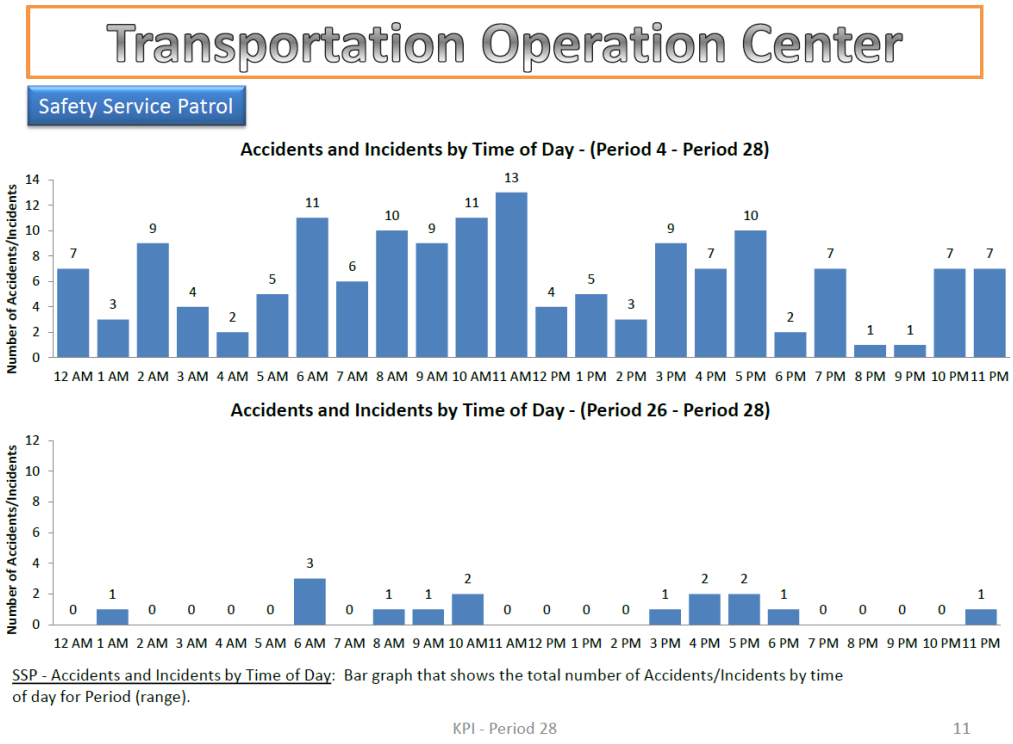


Figure 26-3. Accidents and Incidents by Time of Day. *Identifying when we should be best prepared.*

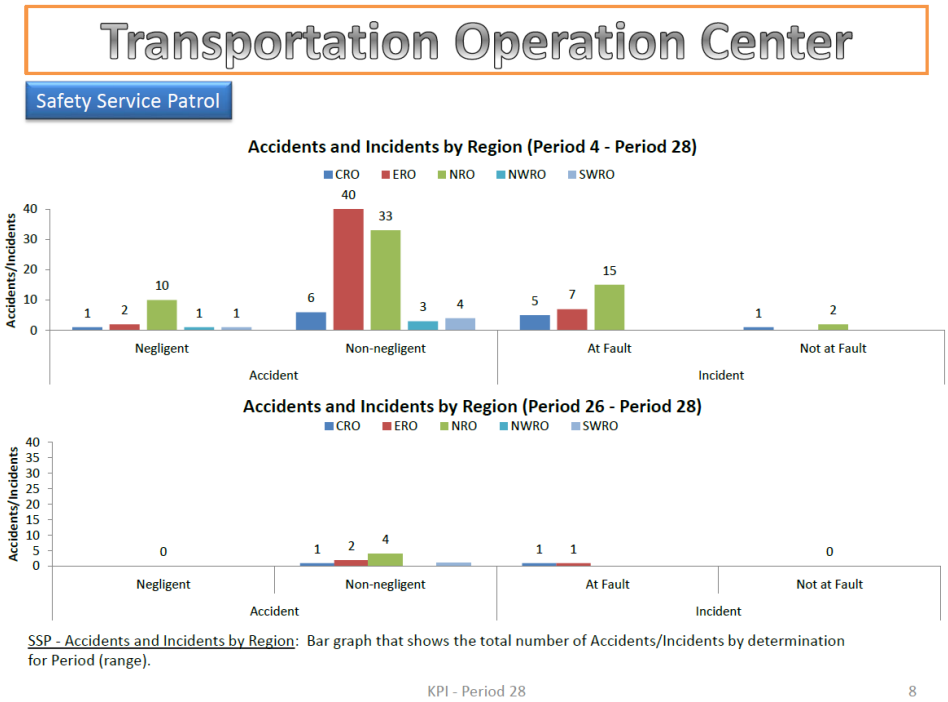


Figure 26-4. Accidents and Incidents by Region. *Identifying where we should be best prepared.*

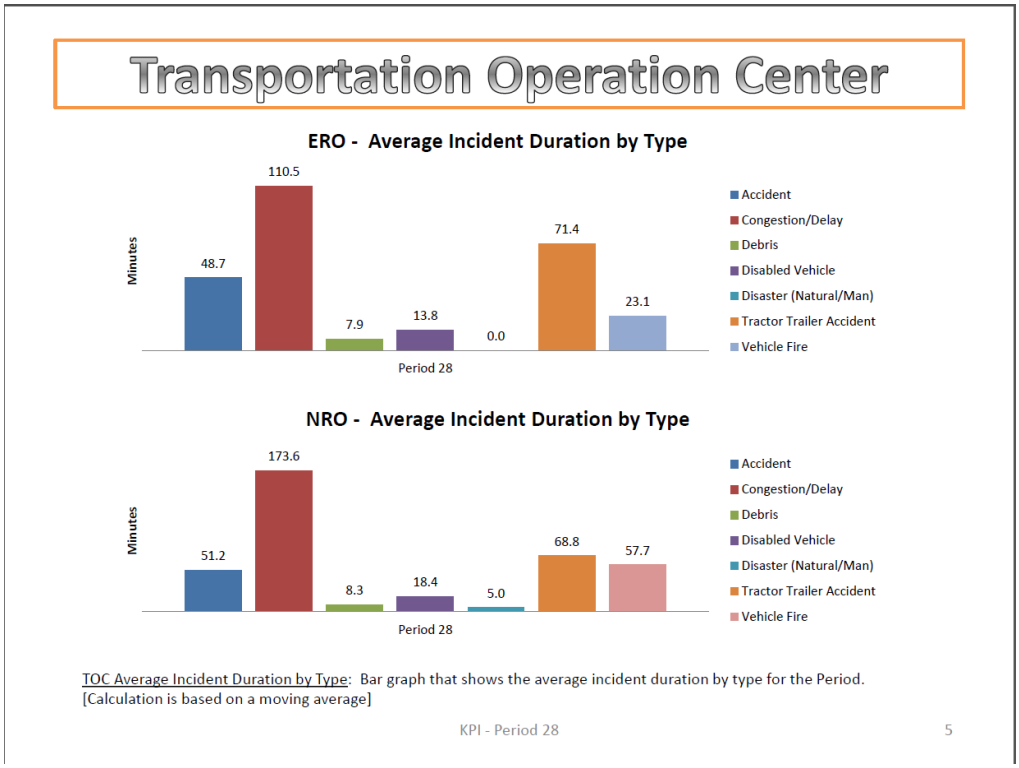
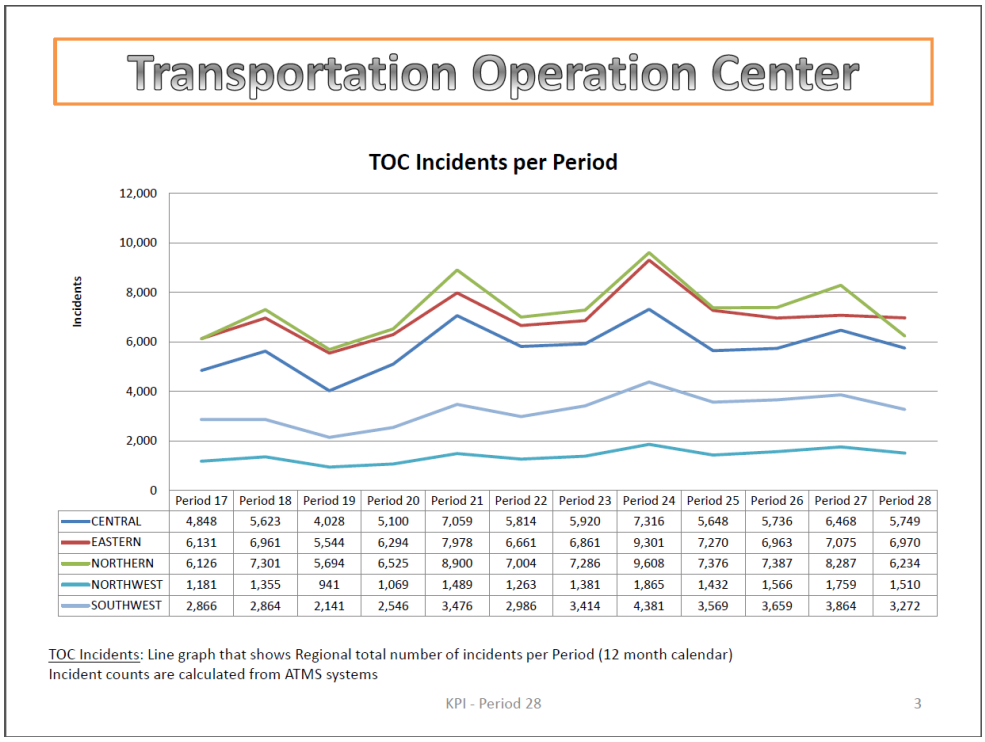


Figure 26-5. Average Incident Duration by Type. *Identifying <u>how</u> we should be best prepared.*



	Period 17	Period 18	Period 19	Period 20	Period 21	Period 22	Period 23	Period 24	Period 25	Period 26	Period 27	Period 28
CENTRAL	4,848	5,623	4,028	5,100	7,059	5,814	5,920	7,316	5,648	5,736	6,468	5,749
EASTERN	6,131	6,961	5,544	6,294	7,978	6,661	6,861	9,301	7,270	6,963	7,075	6,970
NORTHERN	6,126	7,301	5,694	6,525	8,900	7,004	7,286	9,608	7,376	7,387	8,287	6,234
NORTHWEST	1,181	1,355	941	1,069	1,489	1,263	1,381	1,865	1,432	1,566	1,759	1,510
SOUTHWEST	2,866	2,864	2,141	2,546	3,476	2,986	3,414	4,381	3,569	3,659	3,864	3,272

Figure 26-6. Incidents per Reporting Period. *Examining trends helps us anticipate and most appropriately prepare.*

26.4.2 Key Metrics

Table 26-1 provides our initial list of proposed key metrics for the GDOT RAM Program.

Table 26-1. Key Metrics and Measures and How the Data is Recorded. *Tracking metrics and measures promotes continuous improvement.*

METRIC OR MEASURE	SERVICE AREA	MEASURE TYPE	DESCRIPTION
RAM Operational coverage, actual v plan as a % of Truck hours providing service	Operator	SLA	Service provision starts/ends at depot. Lunch/Health breaks not considered "off route" when continuously on call.
Occurrence of negligent accident or negligent personal injury	Operator	SLA	Number of incidents with RAM involvement in a negligent accident or personal injury.
RAM Dispatch Time (Maintenance)	Dispatcher	KPI	Measure how quickly Operators are dispatched following maintenance request notification.
RAM Dispatch Time (Incidents & Roadside Assist)	Dispatcher	KPI	Measure how quickly Operators are dispatched following incident verification request notification.
RAM Customer Feedback Survey (Public)	Operator	KPI	Measure customer satisfaction. Serco will provide a comment card with a Quick Response (QR) Code. Respondents can to scan a barcode with their smartphone or other web-connected computer to directly access our electronic survey.
RAM Customer Feedback Survey (District Office)	Dispatch and Operator	KPI	For each District Office, conduct quarterly survey of Serco and Staff performance. Serco GDOT RAM Program Manager responsible for administering the survey will all results submitted to GDOT.
RAM Customer Feedback Survey (Public)	Operator	KPI	Measure the customer satisfaction, Serco will provide a comment card with a QR Code. Respondents will be able to scan a barcode with their smartphone or other web-connected computer that will take them to our electronic survey or mail hardcopy to GDOT.
Incident Detection by RAM	Operator	DP	Measure the RAM incident detection rate vs other sources.
Hot Spot Analysis	Operator	DP	Measure the number of motorist assists occurring within defined incident hot spot zones. *Note:* hot spots are determined through ongoing and historical analysis of incident data using ProgramVision.
Hot Spot RAM Staging	Operator	DP	Measure effectiveness of strategically deploying RAM near hot-spot zones.
Total Incidents Managed	Dispatch and Operator	DP	Measure total number of motorist assist, maintenance-related incidents, and other incidents by type, location, duration, Emergency Medical Service parties involved, etc.

METRIC OR MEASURE	SERVICE AREA	MEASURE TYPE	DESCRIPTION
RAM Enroute Time	Operator	KPI	Measure of acknowledgement from dispatch and enroute to scene.
On-State surge Support	Dispatch and Operator	KPI	Measurement of inter-district deployment time during surge.
Avg. "on-scene time per incident	Operator	DP	Measure of total time required to arrive on-scene for motorist assist, maintenance, or other incident.
Avg service events per shift	Operator	DP	Measure of the total number and type of service events.
Incident-clearance time with minor damage and no significant injury	Operator	KPI	Measure time between arrival and clearance.
Maintenance-related incident-clearance times by type	Operator	KPI	Measure time between arrival and clearance.
Adherence to SOPs	Dispatch and Operator	KPI	Audit measurement through supervisor task safety analysis.
Truck appropriately marked and stocked	Operator	KPI	Audit measurement through pre- and post-shift inspections.

26.5 PRACTICAL USE OF PROGRAMVISION TO ENHANCE THE GDOT RAM PROGRAM

Generating statewide situational awareness is critical to the success of our operational approach for Departments of Transportation.

Serco developed a visualization tool to geospatially map all ITS assets in Georgia and link them to our Intelligent Maintenance Management System (IMMS). The outcome is a visual of device availability in near-real-time in addition to work order history. Serco ported this application using *Program Vision* for VDOT and this proved to be a major success which we broadened to include two major improvements: incident awareness and incident analysis. Serco is currently using the ProgramVision tool for RAM and TMC operations. We can view traffic incidents on maps, providing us with situational awareness that facilitates well-informed decisions with regard to our response and the efficient use of resources and their deployment. The system captures key data about an incident location, severity level, and duration and type, giving our Operators a tool that delivers a visual of any incident occurring across a District, Region, or State. (See example in **Figure 26-7.**) In Virginia we have used this analysis to make recommendations for route changes.

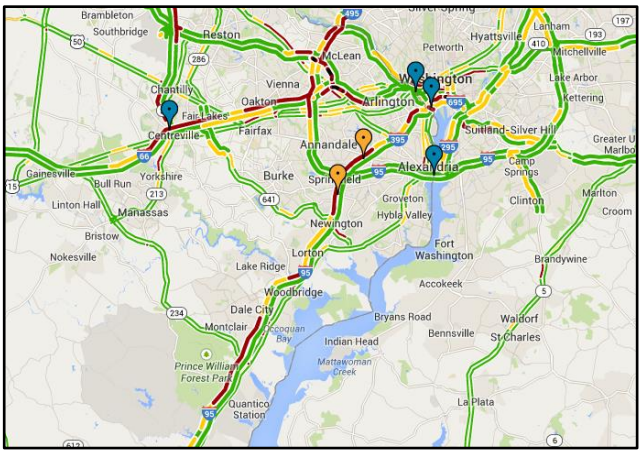


Figure 26-7. Traffic Incident Overlay
Northern Virginia Region is shown with traffic incidents overlaid on Google Travel. (Colored icons indicate incident severity.)

Additionally, the Operator can apply several filters to limit the amount of incidents shown on the screen for a focused analysis and for comparison of the incidents with a live traffic information layer. The Operator can also identify the impact that incidents create on traffic flows and vice versa and use live

video feed from nearby closed-circuit television (CCTV) resources to provide greater awareness and verify incident details. See **Figure 26-8** and **Figure 26-9** as examples.

*Serco will provide **ProgramVision** as part of our operations at no additional cost to GDOT. The system will be available to designated GDOT personnel, Serco's PM, and Supervisors and will be supported by the Serco corporate IT team. Serco hosts the tool remotely in a secure cloud environment, and will integrate the application with the NaviGAtor ATMS— as we have successfully done elsewhere.*

26.5.1 Incident Awareness

By focusing on one particular incident, an Operator can monitor its progress and report on pre-set and industry-recognized TIM stages of an event or incident, such as time-on-scene, clearance, and return to normal traffic flow. The ATMS provides the available timestamps to provide the insight needed to determine when a certain step, within the incident handling process, has been completed. The Operator can also report on the details of the incident (location, type, etc.) and give an overview of all the agencies that have been notified.

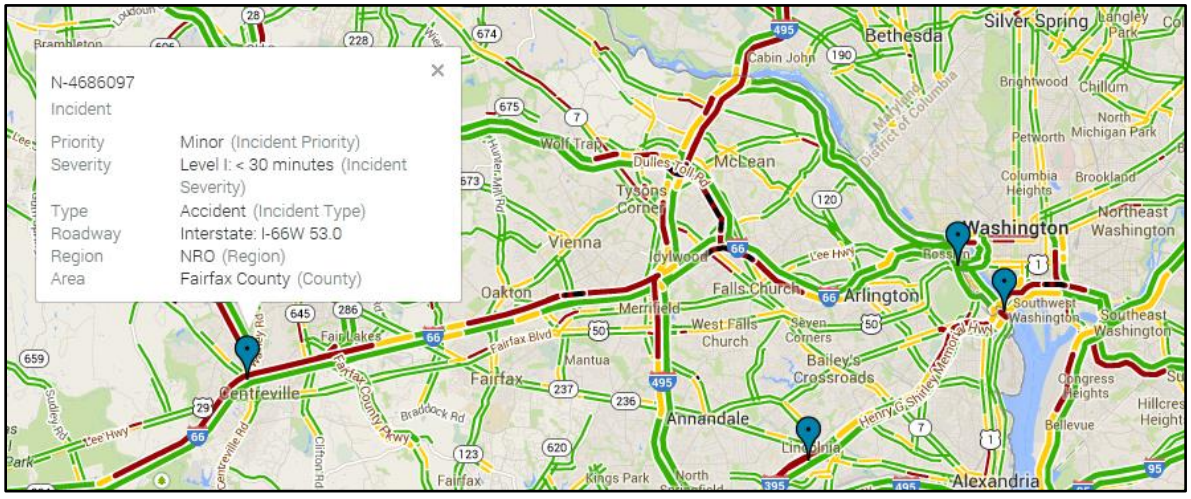


Figure 26-8. Quick Incident Summary. *Hovering over the incident provides the Operator with a quick incident summary, facilitating improved response.*

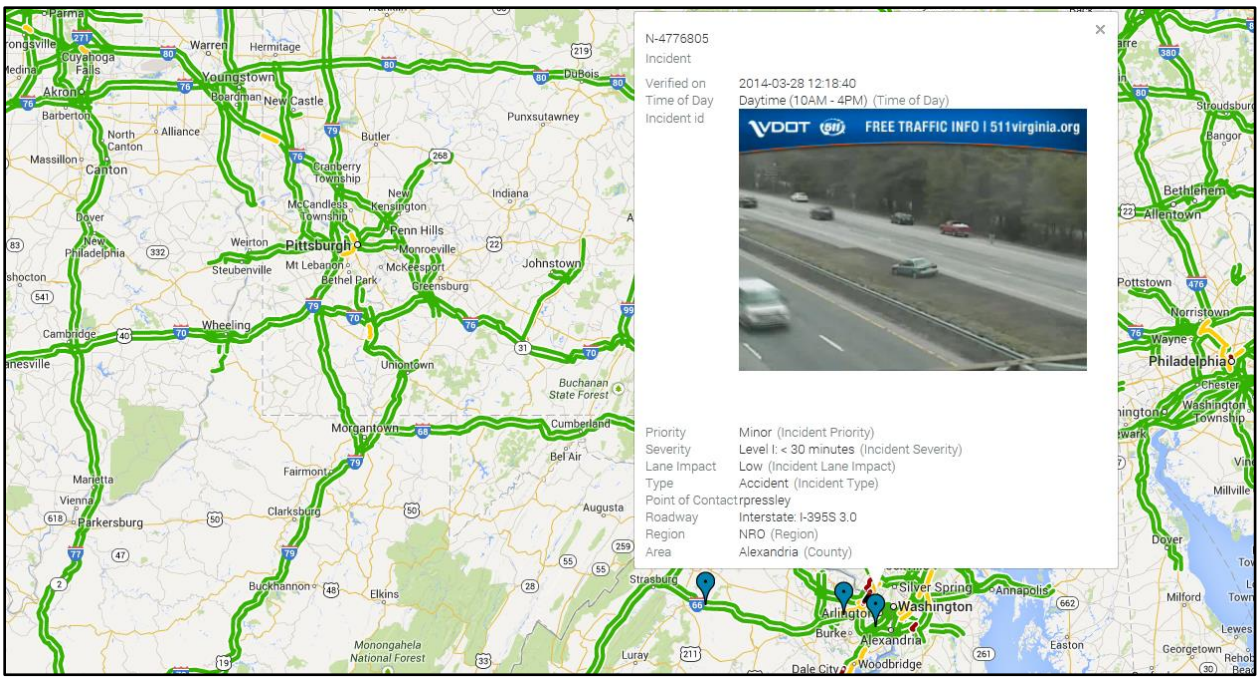


Figure 26-9. ProgramVision Integrated with ATMS System. *When integrated with the ATMS, this tool looks for any nearby available CCTV assets that display live video feed—facilitating improved response.*

26.5.2 Incident Analysis

With the ability to comprehensively capture incident information, an Operator/Manager can ***present a historical perspective of incidents as well as their evolution***. Operators can look at secondary incidents and identify how they relate to the primary incident. This facilitates continuous improvement through enhancing structured exercises built on lessons learned and updating operational practices. **Figure 26-10** shows a series of timed snapshots allowing us to examine a series of events such as related or secondary incidents. Serco uses this information to facilitate post-incident reviews and improve training and can be incorporated into TIM meetings.

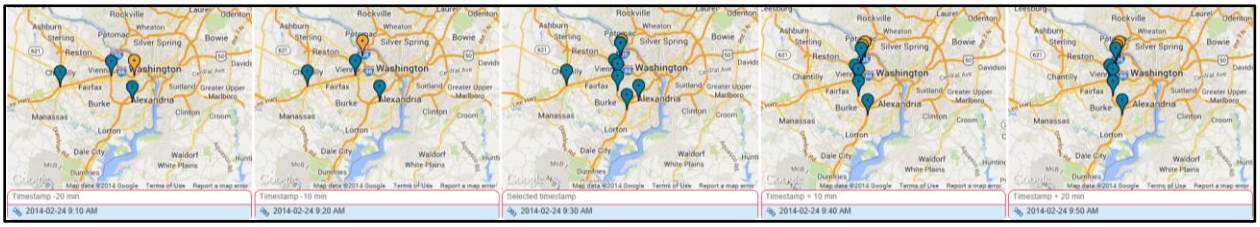


Figure 26-10. Timed Snapshots Showing Series of Events. *A series of timed snapshots allows us to examine a series of events, such as related or secondary incidents—facilitating improved responses.*

In addition, we use an analysis page to look at incident types, location, time of day, vehicle type, etc. **Figure 26-11** is a screen snapshot of the analysis page available to Serco and GDOT personnel.

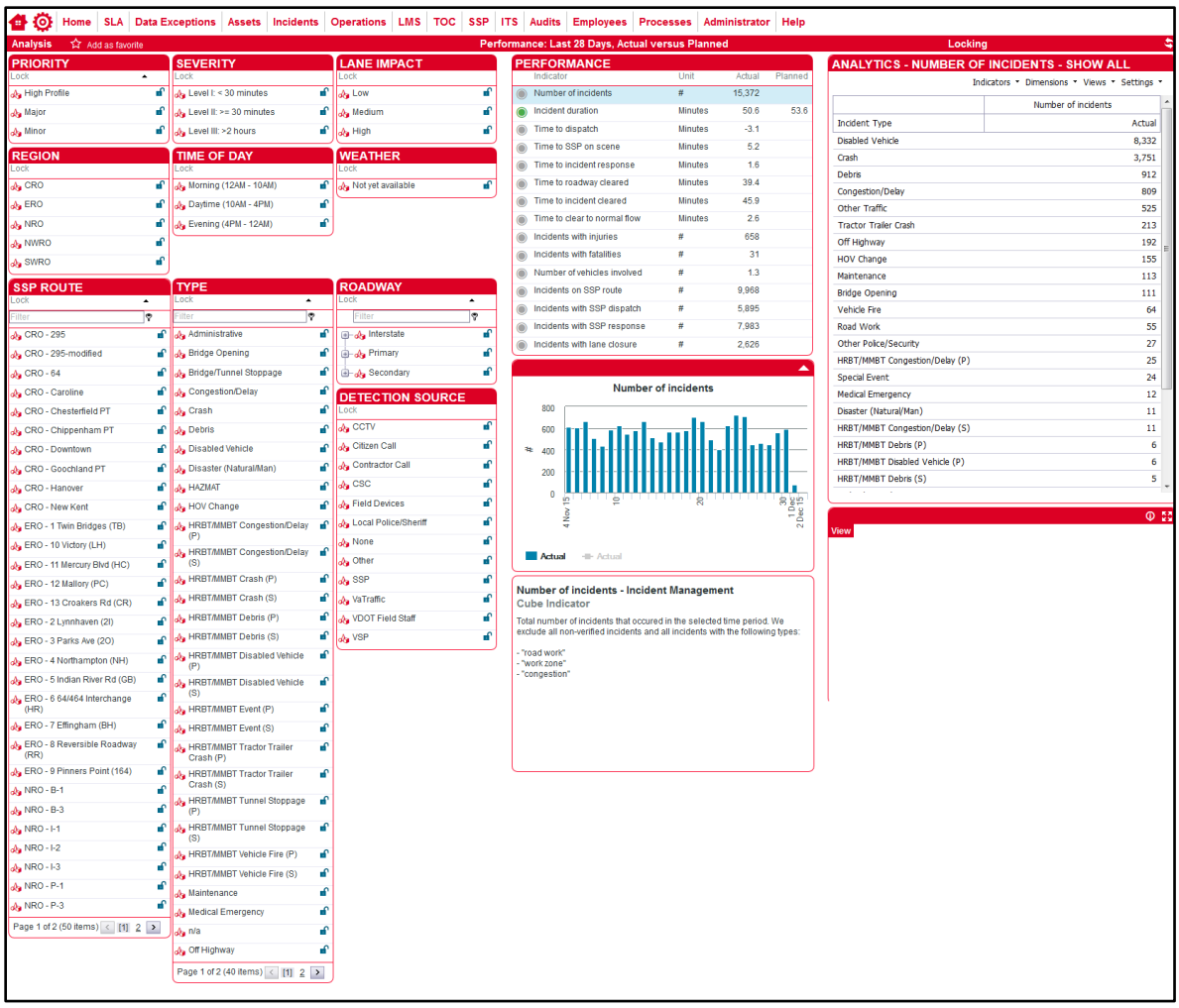


Figure 26-11. Incident Analysis Inquiry Page. *This feature is available to Serco and GDOT personnel and helps RAM personnel anticipate possible incidents and respond more efficiently and appropriately.*

We can use this same data to identify incident hot-spots and adjust RAM patrol routes based on need. The ability to look by day of week and time of day can lead to more efficient use of valuable resources and deliver greater benefits to the traveler. For example, **Figure 26-12** shows the major incident areas around the Richmond, Virginia area.

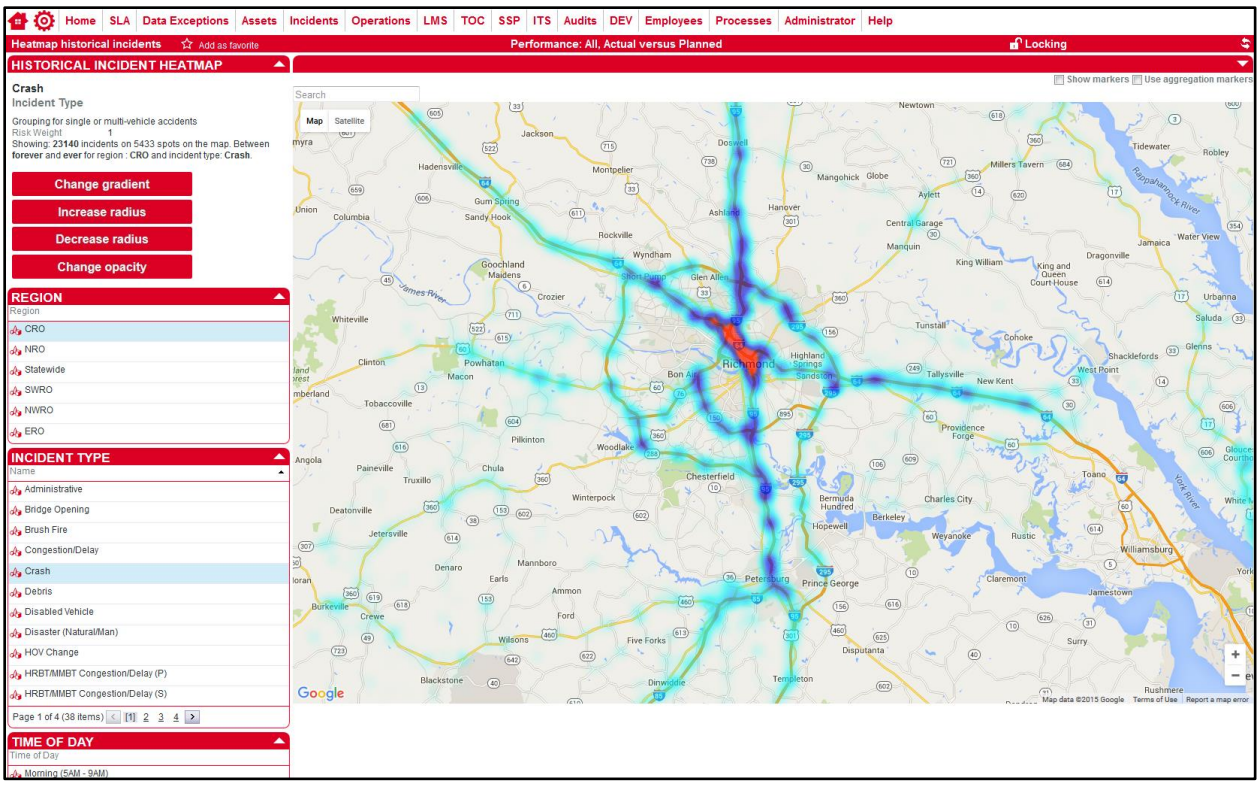


Figure 26-12. Incident Heat Map Example. *This example displays the major incident areas around the Richmond, Virginia area. RAM personnel's access to District incident information can promote improved responses for motorists in Georgia.*

Heat maps are also data visualization tools that enable the RAM staff to see incident locations. They are typically used to map traffic incidents to determine if certain locations are more susceptible to experiencing incidents, on a given day or at a given time. The maps can help us determine strategic locations for staging vehicles. Recognizing that NaviGAtor may not capture all incidents (especially outside of the metro Atlanta area), Serco will also load crash information from the GEARS (crash reporting system) to provide the most accurate representations in our heat maps.

In summary, Serco will closely measure Program performance and monitor operations by putting the right metrics in place and using the best possible tools. Effectively measuring performance includes designing and delivering effective metrics, controls, analysis, reporting, and performance management. Our monitoring approach is beyond simply watching the prescribed SLAs and includes analytical insights to understand trends and dependencies.

For a new, innovative, mission-critical program like GDOT RAM, Serco will closely monitor and manage operational and strategic performance to help achieve the Department's operations and maintenance goals of safely and efficiently patrolling the roads and providing emergency services to motorists.